REMARKS

The application has been amended and is believed to be in condition for allowance.

Independent claim 1 and new dependent claim 9 recite that the steel tube has an absorbed energy before buckling of at least 1160 E(J). This recitation is supported by Table 2, Numbers 17-19.

The amended recitations of claim 1 and new claim 9 are believed novel and non-obvious. See below.

Independent claim 7 has been amended. Support for the amendment can be found at least from Table 2 of the original specification.

There are no formal matters outstanding.

The Official Action rejected claims 1-8 as obvious over either of OKADA et al. 5,374,322 and JP 6-179945.

As an initial matter, the obviousness rejection over JP'945 is improper, as a complete English-language translation has not been considered. As such, the Examiner cannot say what the reference teaches.

In any event, neither reference teaches or suggests the claim 7 recitation of "subjecting the mother steel tube to a diameter-reducing rolling process in which the total diameter-reduction rate is no less than 20 % and the temperature at which the diameter-reducing rolling process is finished is 750 °C or less". That is, there is no teaching of a temperature at which the

diameter-reducing rolling process is finished (hereafter "TRF") is 750 °C or less.

No assertion as to this feature has been made with respect to JP' 945.

Further, according to OKADA, a preferable TRF is within the range of 800 to 1000 °C. Indeed, OKADA teaches away from the recited temperature. See column 8, lines 49-51 of the specification, where OKADA discloses "formation of a ferrite phase is inevitable under 800 °C, and the steel strength is decreased."

Unlike OKADA, in the method of producing a steel pipe in the present invention, it is a feature that the TRF is 750 °C or less. Compare the result of Steel tube Number 12 with that of Steel tube Number 13. Steel tube Number 12 in application Table 2 is produced with the condition of TRF being 750 °C, and has a larger value of absorbed energy before buckling than Steel tube Number 13 (comparative example) produced by a condition of a conventional TRF, i.e., TRF of 850 °C. Note, the definition of "absorbed energy before buckling" is shown in Figure 2. As shown by Figure 3, the greater the amount of absorbed energy before buckling, the more superior is the steel tube as one for use in reinforcement of an automobile.

All TRFs in the examples of the invention in Table 2 are 750 °C or less. There is a great difference in "absorbed energy before buckling" between i) a steel pipe produced by a condition of

TRF of 800 °C or more as compared to ii) another steel pipe produced with TRF of 750 °C or less.

Note that the steel pipes having the highest values of absorbed energy are Numbers 17, 18, and 19, all of which have TRFs of 700 °C. Such temperatures are far lower than those disclosed by OKADA, i.e., 800 to 1000 °C. Also note that the lowest absorbed energy of Numbers 17-19 (No. 17) has 2/3 greater absorbed energy as compared to comparative example 20.

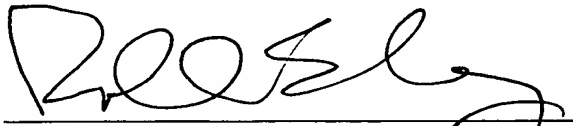
Thus, as explained above, there is a great advantage between the method of producing a pipe in the present invention and that of OKADA regarding TRF, as the absorbed energy before buckling of the produced pipes are much larger in the present invention than those in OKADA.

Therefore, the present claims are believed non-obvious.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. §1.16 or under 37 C.F.R.§1.17.

Respectfully submitted,

YOUNG & THOMPSON



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